

WHAT IS CLAIMED IS:

1. A photomask defect correction method for a photomask defect correction device employing an ion beam equipped with a function for introducing diacetone acrylamide to an ion beam irradiation position and the vicinity of the ion beam irradiation position, capable of carrying out both clear defect correction and opaque defect correction using a single gas species by changing irradiation quantity or irradiation density of the ion beam, scanning conditions, and gas pressure conditions during processing.
2. The photomask defect correction method as disclosed in claim 1, wherein the photomask defects are projection defects of a glass trench-type Levenson mask.
3. A photomask defect correction method employing a photomask defect correction device employing an ion beam equipped with a function for introducing diacetone acrylamide to an ion beam irradiation position and the vicinity of the ion beam irradiation position, wherein clear defects are corrected using diacetone acrylamide as a source gas for a light-blocking film.
4. A photomask defect correction method employing a photomask defect correction device employing an ion beam equipped with a function for introducing diacetone acrylamide to an ion beam irradiation position and the vicinity of the ion beam irradiation position, wherein opaque defects are corrected using diacetone acrylamide as an etching gas.

5. A photomask defect correction method using a photomask defect correction device employing an ion beam equipped with a function for introducing diacetone acrylamide to an ion beam irradiation position and to the vicinity of the ion beam irradiation position, wherein projection defects of a glass trench-type Levenson mask are corrected using diacetone acrylamide as an etching gas.